

*[Handwritten signature]*  
~~Analytical Supervisor~~

This is to certify that the following results were determined using  
good laboratory practices and in accordance with federal or state  
approved methodologies.

Billing Code: 327.34-20

Sampling Agency: TDEC: Division of Water Pollution Control

Sent To: Greg Denton TDEC-WPC

Lab ID: K00003143

TDH: Lab Services JRL	TDH: Lab Services KRL	Lab Services - Jackson Regional Lab	Lab Services - Nashville Central Lab	Nashville, TN 37243
TDH: Lab Services NCL	TDH: Lab Services NC	Lab Services - Nashville Regional Lab	Lab Services - Nashville Central Lab	615-262-6300
731-426-0686	865-549-5201	Knoxville, TN 37920	Knoxville, TN 37920	Nashville, TN 37243
Jackson, TN 38301				

STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES



Lab-Sample Number: K00003143001 Project Name: TVA-Ash Spill Sample Description: Emory River mile 12.1 Sample Site No.: 1 Sample Project Name: TVA ash spill Conductivity: 27 Temperature: 11.56 Dissolved Oxygen: 13.02 mg/L Station No.: EMORY012.1.R0 Date/Time Collected: 11/19/2009 11:40 Sampler's Name: Geoff Klein CS: Flow: Other: Dissolved Oxygen: 13.02 mg/L Count: ROANE - 73 Sample Matrix: Water EFO: Knoxville Agency: TDEC-WPC Billing Code: 327.34-20 Send Report To: TDEC-WPC Priority Date: 11/19/2009 12:45 Received By: Ken Hitchman ANALYTE: Total Alkalinity, Total Method: EPA 310.2 Date: 11/24/2009

TEST: Alkalinity, Total Method: EPA 310.2 ANALYTE: Calcium Hardness Result: 17 Units: mg/L Value: 3.8 Precision: 10 MChen Date: 11/24/2009 TEST: Hardness, Calcium Method: SM 3500-Ca D ANALYTE: Calcium Hardness Result: 16 Units: mg/L Value: 0.7 Precision: 1 MChen Date: 11/23/2009 TEST: Residue, Settleable Method: SM 2540F ANALYTE: Residue, Settleable Result: 10 Units: mL Value: 0.10 Precision: 0.10 PLeathers Date: 11/20/2009 TEST: Residue, Suspended Method: SM 2540D ANALYTE: Residue, Suspended Result: 10 Units: mL Value: 10 APepples Date: 11/20/2009

U - Undetectable  
MDL - Method Detection Limit  
MQL - Method Quantitation Limit  
j - Estimated value between MDL and MQL

Lab-Sample Number: K00003143002 Project Name: TVA-Ash Spill Sample Description: Emory River mile 2.1 Sampler Project Name: TVA ash spill Project Site No.: 2 Station No.: EMORY002.1R0 Date/Time Collected: 11/19/2009 09:53 Sample Name: Geoff Klein Temperature: 11.10 Dissolved Oxygen: 12.94 mg/L Conductivity: 53 UMHQ pH Units: 7.26 pH: Chlorine, residual: 0.00 MHO Count: ROANE - 73 Sample Matrix: Water EFO: Knoxvile Sampling Agency: TDEC-WPC Billing Code: 327-34-20 Send Report To: TDEC-WPC Agency Involved: TDEC-WPC Priority Date: 11/19/2009 12:45 Date/Time Received: 11/19/2009 12:45 Received By: Ken Hitchman TEST: Alkalinity, Total METHOD: EPA 310.2 ANALYTE Total Alkalinity RESULT UNITS MDL MQL ANALYZED BY: DATE 19 mg/L 3.8 10 M Chen 11/24/2009 TEST: Hardness, Calcium METHOD: SM 3500-CaD ANALYTE Hardness RESULT UNITS MDL MQL ANALYZED BY: DATE 17 mg/L 0.7 1 M Chen 11/23/2009 TEST: Residue, Settleable METHOD: SM 2540F ANALYTE Settleable Residue RESULT UNITS MDL MQL ANALYZED BY: DATE U ml/L 0.10 0.10 P Leathers 11/20/2009 TEST: Residue, Suspended METHOD: SM 2540D ANALYTE Suspended Solids RESULT UNITS MDL MQL ANALYZED BY: DATE U mg/L 10 10 A Peoples 11/20/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number:	K00003143003	Project Name:	TVA-Ash Spill	Sample Project Name:	TVA Ash spill	Sample Description:	Approx 100' downstream from middle dredge pc	Chlorine, residual:	55	UHMO
Field Determinations	PH:	7.26	PH Units	Station No.:	2A	Project Site No.:	2A	Dissolved Oxygen:	12.45	mg/L
Sample No.:	11/19/2009	Date/Time Collected:	11/19/2009 10:05	Geoff Klein	Geoff Klein	Sample Matrix:	Water	Flow:	CFS	CFU
County:	ROANE - 73	Site No.:	11.11	Other:	Other:	Sample Matrix:	Knoxville	Dissolved Oxygen:	12.45	mg/L
State/Time Collected:	11/19/2009 10:05	Date/Time Collected:	11/19/2009 12:45	TDCEC-WPC	TDCEC-WPC	Sampling Agency:	TDCEC-WPC	Priority Date:	Send Report To:	Billing Code:
ANALYTE	TEST: Alkalinity, Total	METHOD: EPA 310.2	RESULTS	UNITS	MDL	MDL	MDL	ANALYZED BY:	DATE	TEST: Alkalinity, Total
ANALYTE	TEST: Hardness, Calcium	METHOD: SM 3500-Ca-D	RESULTS	UNITS	MDL	MDL	MDL	ANALYZED BY:	DATE	ANALYTE
ANALYTE	TEST: Residue, Settleable	METHOD: SM 2540F	RESULTS	UNITS	MDL	MDL	MDL	ANALYZED BY:	DATE	ANALYTE
ANALYTE	TEST: Residue, Suspended	METHOD: SM 2540D	RESULTS	UNITS	MDL	MDL	MDL	ANALYZED BY:	DATE	ANALYTE
Total Suspended Solids	30	mg/L	10	10	A Peoples	11/20/2009				Total Suspended Solids
U - Undetected										U - Undetected
MDL - Method Detection Limit										MDL - Method Detection Limit
J - Estimated value between MDL and MQL										J - Estimated value between MDL and MQL
MQL - Method Quantitation Limit										MQL - Method Quantitation Limit

### U - Undetected

M&R - Method Quantification Limit

J - Estimated Values Between MDL and MCL

TEST: Alkalinity, Total	ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Method: EPA 310.2		20	mg/L	3.8	10	M Chen	11/24/2009
TEST: Hardness, Calcium	ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Method: SM 3500-Ca D		17	mg/L	0.7	1	M Chen	11/23/2009
TEST: Residue, Hardness	ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Method: SM 3500-Ca D		17	mg/L	0.7	1	M Chen	11/23/2009
TEST: Residue, Settleable	ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Method: SM 2540F		U	ml/L	0.10	0.10	P Leathers	11/20/2009
TEST: Residue, Settleable	ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Method: SM 2540D		U	ml/L	0.10	0.10	P Leathers	11/20/2009
TEST: Residue, Suspended	ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids		19	mg/L	10	10	A Peoples	11/20/2009

Lab-Sample Number:	K00003143005	Project Name:	TVA-Ash Spill	Sample Description:	TVA River mile 1.7	Sampler Project Name:	TVA Ash spill	Sampler Site No.:	3	Project Site Name:	TVA Ash spill	Station No.:	EMORY001.TRO	Date/Time Collected:	11/19/2009 10:23	Sample's Name:	Geoff Klein	EFQ:	Knoxville	Sampling Agency:	TDEC-WPC	Billing Code:	327.34-20	Send Report To:	TDEC-WPC	Agency Involved:		Priority Date:		Received By:	Ken Hitchman																
Field Determinations	PH: 7.23	PH Units	Conductivity:	54	Temperature:	11.22	Dissolved Oxygen:	12.55	mg/L	Flow:	CFS	Count:	RONNE - 73	Sample Matrix:	Water	EFQ:	Sample Matrix:	ROANE	Sampling Agency:	TDEC-WPC	Billing Code:	327.34-20	Send Report To:	TDEC-WPC	Agency Involved:		Priority Date:		Received By:	Ken Hitchman																	
Project Number:	K00003143005	Project Name:	TVA-Ash Spill	Sample Description:	Chlorine, residual:	Conductivity:	54	Temperature:	11.22	Dissolved Oxygen:	12.55	mg/L	Count:	RONNE - 73	Sample Matrix:	Water	EFQ:	Sample Matrix:	ROANE	Sampling Agency:	TDEC-WPC	Billing Code:	327.34-20	Send Report To:	TDEC-WPC	Agency Involved:		Priority Date:		Received By:	Ken Hitchman																
TEST: Alkalinity, Total	METHOD: EPA 310.2	ANALYTE	RESULT	UNITS	MDL	MDL	MDL	MDL	MDL	ANALYZED BY:	DATE	TEST: Hardness, Calcium	METHOD: SM 3500-CaD	ANALYTE	RESULT	UNITS	MDL	MDL	MDL	MDL	ANALYZED BY:	DATE	TEST: Residue, Settleable	METHOD: SM 2540F	ANALYTE	RESULT	UNITS	MDL	MDL	MDL	MDL	MDL	ANALYZED BY:	DATE	Total Suspended Solids	23	mg/L	10	10	10	10	A Peoples	11/20/2009	U - Undetected	U - Method Detection Limit	MQL - Method Quantitation Limit	J - Estimated value between MDL and MQL
TEST: Hardness, Calcium	METHOD: SM 3500-CaD	ANALYTE	RESULT	UNITS	MDL	MDL	MDL	MDL	MDL	ANALYZED BY:	DATE	TEST: Residue, Suspended	METHOD: SM 2540D	ANALYTE	RESULT	UNITS	MDL	MDL	MDL	MDL	MDL	ANALYZED BY:	DATE	Total Suspended Solids	23	mg/L	10	10	10	10	A Peoples	11/20/2009	U - Undetected	U - Method Detection Limit	MQL - Method Quantitation Limit	J - Estimated value between MDL and MQL											

Lab-Sample Number:	K00003143006	Project Name:	TVA-Ash Spill	Sample Project Name:	TVA ash spill	Station No.:	EMORY000.1.R0	Date/Time Collected:	11/19/2009 10:36	Sample's Name:	Geoff Klein	EFO:	Knoxville	Sampling Agency:	TDEC-WPC	Priority Date:	327.34-20	Billing Code:	TDEC-WPC	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	Received By:	Ken Hitchman																																						
Field Determinations	7.68	pH:	Chlorine, residual:	Conductivity:	217	UMHO	Temperature:	13.70	Dissolved Oxygen:	12.04	mg/L	CS	Count:	ROANE - 73	Sample Matrix:	Water	EFO:	Sampling Agency:	TDEC-WPC	Priority Date:	327.34-20	Billing Code:	TDEC-WPC	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	Received By:	Ken Hitchman																																		
Project Name:	TVA-Ash Spill	Sample Description:	Emory River mile 0.1	Sample Project Name:	TVA ash spill	Station No.:	4	Sample's Name:	Geoff Klein	Flow:	m3/h	CFs	Count:	ROANE - 73	Sample Matrix:	Water	EFO:	Sampling Agency:	TDEC-WPC	Priority Date:	327.34-20	Billing Code:	TDEC-WPC	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	Received By:	Ken Hitchman																																		
Field Determinations	7.68	pH:	Chlorine, residual:	Conductivity:	217	UMHO	Temperature:	13.70	Dissolved Oxygen:	12.04	mg/L	CS	Count:	ROANE - 73	Sample Matrix:	Water	EFO:	Sampling Agency:	TDEC-WPC	Priority Date:	327.34-20	Billing Code:	TDEC-WPC	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	Received By:	Ken Hitchman																																		
TEST: Alkalinity, Total	METHOD: EPA 310.2	ANALYTE	RESULTS UNITS	MDL	MDL	ANALYZED BY:	DATE	Total Alkalinity	100	mg/L	3.8	10	M Chen	11/24/2009	TEST: Hardness, Calcium	METHOD: SM 3500-Ca D	ANALYTE	RESULTS UNITS	MDL	MDL	ANALYZED BY:	DATE	Calcium hardness	84	mg/L	0.7	1	M Chen	11/23/2009	TEST: Residue, Settleable	METHOD: SM 2540F	ANALYTE	RESULTS UNITS	MDL	MDL	ANALYZED BY:	DATE	Settible Residue	U	ml/L	0.10	0.10	P Leathers	11/20/2009	TEST: Residue, Suspended	METHOD: SM 2540D	ANALYTE	RESULTS UNITS	MDL	MDL	ANALYZED BY:	DATE	Total Suspended Solids	U	mg/L	10	10	A Peoples	11/20/2009	j - Estimated value between MDL and MQL	MDL - Method Detection Limit	MQL - Method Quantitation Limit	U - Undetected

Lab-Sample Number:	K00003143007	Project Name:	TVA-Ash Spill	Sample Description:	Clinch River mile 2.3	Sampler Project Name:	TVA ash spill	Project Site No.:	5	Station No.:	CLINC002,3R0	Date/Time Collected:	11/19/2009 11:05	Sample Name:	Geff Klein	EFo:	Knoxville	Sampling Agency:	TDEC-WPC	Billing Code:	327.34-20	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	Priority Date:		Received By:	Ken Hitchman														
Field Determinations	pH: 7.70	pH Units	Chlorine, residual:	Conductivity: 219	Temperature: 13.72	Dissolved Oxygen: 11.95 mg/L	Other:	Flow:	CFS	County:	RONE - 73	Sample Matrix:	Water	EFo:	Samples Matrix:	ROANE - 73	Sampling Agency:	TDEC-WPC	Billing Code:	327.34-20	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	Priority Date:		Received By:	Ken Hitchman															
Project Name:	TVA-Ash Spill	Sample Description:	Clinch River mile 2.3	Sampler Project Name:	TVA ash spill	Project Site No.:	5	Station No.:	CLINC002,3R0	Date/Time Collected:	11/19/2009 11:05	Sample Name:	Geff Klein	EFo:	Samples Matrix:	ROANE - 73	Sampling Agency:	TDEC-WPC	Billing Code:	327.34-20	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	Priority Date:		Received By:	Ken Hitchman															
ANALYTE	TEST: Alkalinity, Total	RESULTS	UNITS	MDL	MDL	ANALYZED BY:	DATE	TEST: Alkalinity	RESULTS	UNITS	MDL	MDL	ANALYZED BY:	DATE	TEST: Hardness, Calcium	RESULTS	UNITS	MDL	MDL	ANALYZED BY:	DATE	TEST: Residue, Settatable	RESULTS	UNITS	MDL	MDL	ANALYZED BY:	DATE	TEST: Residue, Suspended	RESULTS	UNITS	MDL	MDL	ANALYZED BY:	DATE	Total Suspended Solids	U	mg/L	10	10	A Peeples	11/20/2009	U - Undetected
ANALYTE	TEST: Residue, Suspended	METHOD: SM 2540D						ANALYTE	TEST: Residue, Settatable	METHOD: SM 2540F					ANALYTE	TEST: Residue, Settatable	METHOD: SM 2540D					ANALYTE	TEST: Residue, Suspended	METHOD: SM 2540D					ANALYTE	TEST: Residue, Suspended	METHOD: SM 2540D					J - Estimated Value between MDL and MQL	MQL - Method Detection Limit	MQL - Method Quantitation Limit	MDL - Method Detection Limit	MDL - Method Quantitation Limit	U - Undetected		

Lab-Sample Number: K00003143008  
 Sample Description: Clinch River TVA Discharge Point  
 Project Site No.: TVA Ash Spill  
 Sampler Project Name: UMO  
 Station No.: 5A  
 Dissolved Oxygen: 11.72 mg/L  
 Conductivity: 77  
 pH: 7.49  
 Field Determinations pH Units  
 Project Name: TVA-Ash Spill  
 Sampler Name: UMO  
 Project Site No.: TVA Ash Spill  
 Date/Time Collected: 11/19/2009 11:17  
 Sample Matrix: Geoff Klein  
 County: ROANE - 73  
 EFO: Water  
 Sampling Agency: TDGC-WPC  
 Billing Code: 327.34-20  
 Send Report To: TDGC-WPC  
 Agency Involved: TDGC-WPC  
 Priority Date: 11/19/2009 12:45  
 Received By: Ken Hitchman  
 ANALYTE TEST: Alkalinity, Total  
 RESULT UNITS MDL MQL ANALYZED BY: DATE  
 27 mg/L 3.8 10 M Chen 11/24/2009  
 ANALYTE TEST: Hardness, Calcium  
 RESULT UNITS MDL MQL ANALYZED BY: DATE  
 29 mg/L 0.7 1 M Chen 11/23/2009  
 ANALYTE TEST: Residue, Settleable  
 RESULT UNITS MDL MQL ANALYZED BY: DATE  
 0.10 ml/L 0.10 P Leathers 11/20/2009  
 ANALYTE TEST: Residue, Suspended  
 RESULT UNITS MDL MQL ANALYZED BY: DATE  
 13 mg/L 10 A Peoples 11/20/2009  
 Total Suspended Solids  
 MQL - Method Detection Limit  
 J - Estimated value between MDL and MQL  
 U - Undetected  
 MQL - Method Quantitation Limit

U - Undetected

MQL - Method Quantification Limit

#### J - Estimated Value Between MDL and MCL

TEST: Alkalinity, Total	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
	130	mg/L	3.8	10	M Chen	11/24/2009
Total Alkalinity	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
	10	mg/L	10	10	A Peoples	11/20/2009
TEST: Alkalinity, Dissolved	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
	10	mg/L	10	10	A Peoples	11/20/2009
TEST: Dissolved Solids	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
	10	mg/L	10	10	A Peoples	11/20/2009
TEST: Residue, Dissolved	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
	U	mg/L	0.10	0.10	P Leathers	11/20/2009
Settlesable Residue	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
	U	mg/L	0.10	0.10	P Leathers	11/20/2009
TEST: Residue, Settlesable	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
	U	mg/L	0.10	0.10	P Leathers	11/20/2009
TEST: Residue, Suspended	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
	U	mg/L	0.10	0.10	P Leathers	11/20/2009

J - Eliminated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

TEST: Alkalinity, Total	RESULt	UNITS	MDL	MQL	ANALYZED BY:	DATE
TEST: Alkalinity	RESULt	UNITS	MDL	MQL	ANALYZED BY:	DATE
TEST: Hardness, Calcium	RESULt	UNITS	MDL	MQL	ANALYZED BY:	DATE
TEST: Hardness	95	mg/L	0.7	1	M Chen	11/23/2009
ANALYTE	RESULt	UNITS	MDL	MQL	ANALYZED BY:	DATE
TEST: Residue, Settable	RESULt	UNITS	MDL	MQL	ANALYZED BY:	DATE
TEST: Residue, Suspended	RESULt	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peoples	11/20/2009

Lab-Sample Number: K00003143010  
 Project Name: TVA-Ash Spill  
 Sample Description: Clinch River mile 4.5 near Sugar Grove Valley F Chlorine, residue:  
 Project Site No.: 6 dup  
 Station No.: CLINCO04.5R0-FD  
 Date/Time Collected: 11/19/2009 10:50  
 Sampler's Name: Geoff Klein  
 County: ROME - 73  
 EFO: Water  
 Sampling Agency: TDEC-WPC  
 Billing Code: 327.34-20  
 Send Report To: TDEC-WPC  
 Agency Involved: TDEC-WPC  
 TEST: Alkalinity, Total  
 METHOD: EPA 310.2  
 ANALYTE  
 TEST: Hardness, Calcium  
 METHOD: SM 3500-Ca D  
 ANALYTE  
 TEST: Residue, Settable  
 METHOD: SM 2540F  
 ANALYTE  
 TEST: Residue, Suspended  
 METHOD: SM 2540D  
 ANALYTE  
 Total Suspended Solids

Analytical Supervisor

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

Billing Code: 327.34-20

Sampling Agency: TDEC: Division of Water Pollution Control

Lab ID: K00003143  
Lab Services NCL  
TDH: Lab Services KRL  
Lab Services - Jackson Regional Lab  
Lab Services - Knoxville Regional Lab  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
Knoxville, TN 37920  
TDEC-WPC  
Michigan Attchey  
Knoxville FO  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534  
Knoxville, TN 37921

TDH: Lab Services JRL  
Lab Services NCL  
TDH: Lab Services KRL  
Lab Services - Jackson Regional Lab  
Lab Services - Knoxville Regional Lab  
Nashville, TN 38301  
Knoxville, TN 37920  
865-549-5201  
615-262-6300  
731-426-0686

STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES





Lab-Sample Number:	K00003143001	Project Name:	TVA-Ash Spill	Sample Description:	TVA Ash spill	Sample Project Name:	TVA Ash spill	Project Site No.:	1	Station No.:	EMORY012.1R0	Date/Time Collected:	11/19/2009 11:40	Sample's Name:	Geoff Klein	Countiy:	ROANE - 73	Sample Matrix:	Water	FFO:	Knoxville	Sampling Agency:	TDEC-WPC	Billing Code:	327.34-20	Send Report To:	TDEC-WPC	Priority Involved:	TDEC-WPC	Date/Time Received:	11/19/2009 12:45	Received By:	Ken Hitchman	ANALYTE:	MERCURY	TEST: Mercury	METHOD: EPA 245.1	DATE:	11/24/2009	ANALYZED BY:	A Basss	MDL:	0.029	UNITS:	µg/L	RESULT:	U
J - Estimated value between MDL and MQL	MDL - Method Detection Limit	MQL - Method Quantitation Limit	U - Undetected																																												

Lab-Sample Number:	K00003143002	Field Determinations	pH:	TVA-Ash Spill	Sample Description:	Emory River mile 2.1	Sample Site Name:	TVA Ash spill	Project Site No.:	2	Station No.:	EMORY002, RRO	Date/Time Collected:	11/19/2009 09:53	Sample's Name:	Geoff Klein	Sample Matrix:	Water	Countiy:	ROANE - 73	FFO:	Knoxville	Sampling Agency:	TDEC-WPC	Send Report To:	TDEC-WPC	Priority Involved:	TDEC-WPC	Date/Time Received:	11/19/2009 12:45	Received By:	Ken Hitchman	Digestion Metals	METHOD: EPA 200.2	TEST: Digestion Metals	ANALYTE	RESULT	UNITS	MDL	MLL	ANALYZED BY:	DATE																																																																					
Antimony	140	µg/L	6.4	10	Mattanayek	11/20/2009	Boron	260	µg/L	2.9	10	A Wilson	11/20/2009	Copper	0.231	µg/L	0.04	5	Mattanayek	11/20/2009	Chromium	U	µg/L	0.11	1	Mattanayek	11/20/2009	Barium	U	µg/L	0.93	5	Mattanayek	11/20/2009	Arsenic	U	µg/L	2.5	5	Mattanayek	11/20/2009	Beryllium	27	µg/L	0.11	1	Mattanayek	11/20/2009	Chromium	U	µg/L	0.41	1	Mattanayek	11/20/2009	Cadmium	U	µg/L	0.41	1	Mattanayek	11/20/2009	Lead	U	µg/L	0.38	1	Mattanayek	11/20/2009	Cobalt	0.241	µg/L	0.10	1	Mattanayek	11/20/2009	Manganese	66	µg/L	0.42	1	Mattanayek	11/20/2009	Nickel	1.1	µg/L	0.25	1	Mattanayek	11/20/2009	Silver	U	µg/L	1.3	5	Mattanayek	11/20/2009	Thallium	0.071	µg/L	0.03	1	Mattanayek	11/20/2009	Zinc	U	µg/L	3.4	5	Mattanayek	11/20/2009
Aluminum	140	µg/L	6.4	10	Mattanayek	11/20/2009	Antimony	U	µg/L	0.33	1	Mattanayek	11/20/2009	Boron	U	µg/L	0.93	5	Mattanayek	11/20/2009	Arsenic	U	µg/L	2.5	5	Mattanayek	11/20/2009	Beryllium	27	µg/L	0.11	1	Mattanayek	11/20/2009	Chromium	U	µg/L	0.41	1	Mattanayek	11/20/2009	Cadmium	U	µg/L	0.41	1	Mattanayek	11/20/2009	Lead	U	µg/L	0.38	1	Mattanayek	11/20/2009	Cobalt	0.231	µg/L	0.04	1	Mattanayek	11/20/2009	Manganese	66	µg/L	0.42	1	Mattanayek	11/20/2009	Nickel	1.1	µg/L	0.25	1	Mattanayek	11/20/2009	Silver	U	µg/L	1.3	5	Mattanayek	11/20/2009	Thallium	0.071	µg/L	0.03	1	Mattanayek	11/20/2009	Zinc	U	µg/L	3.4	5	Mattanayek	11/20/2009														
TEST: ICP-MS	METHOD: EPA 200.8							ANALYTE	RESULT	UNITS	MDL	MLL	ANALYZED BY:	DATE																																																																																																	
Iron	260	µg/L	2.9	10	A Wilson	11/20/2009	Boron	U	µg/L	0.11	1	Mattanayek	11/20/2009	Arsenic	U	µg/L	0.93	5	Mattanayek	11/20/2009	Beryllium	27	µg/L	0.11	1	Mattanayek	11/20/2009	Chromium	U	µg/L	0.41	1	Mattanayek	11/20/2009	Cadmium	U	µg/L	0.41	1	Mattanayek	11/20/2009	Lead	U	µg/L	0.38	1	Mattanayek	11/20/2009	Cobalt	0.231	µg/L	0.04	1	Mattanayek	11/20/2009	Manganese	66	µg/L	0.42	1	Mattanayek	11/20/2009	Nickel	1.1	µg/L	0.25	1	Mattanayek	11/20/2009	Silver	U	µg/L	1.3	5	Mattanayek	11/20/2009	Thallium	0.071	µg/L	0.03	1	Mattanayek	11/20/2009	Zinc	U	µg/L	3.4	5	Mattanayek	11/20/2009																					





LAB-SAMPLE NUMBER:	K00003143003	PROJECT NAME:	TVA-Ash Spill	SAMPLE DESCRIPTION:	Approx 100' downstream from middle dredge pc	CHLORINE, RESIDUAL:	Chlorine, residual:	CONDUCTIVITY:	55	pH UNITS:	7.26	FIELD DETERMINATIONS:	TVA Ash spill	PROJECT SITE NO.:	2A	STATION NO.:	Dredge Plume	DATE/TIME COLLECTED:	11/19/2009 10:05	SAMPLER'S NAME:	Geoff Klein	DATE/TIME COLLECTED:	11/19/2009 10:05	SAMPLER'S NAME:	Geoff Klein	FLOW:	CFs	COUNTY:	ROANE - 73	SAMPLE MATRIX:	Water	EEQ:	Knoxville	SAMPLING AGENCY:	TDEC-WPC	BILLING CODE:	327.34-20	SEND REPORT TO:	TDEC-WPC	PRIORITY DATE:	11/19/2009 12:45	DATE/TIME RECEIVED:	11/19/2009 12:45	RECEIVED BY:	Ken Hitchman	MERCURY	MERCURY	TEST: MERCURY	METHOD: EPA 245A	ANALYTE	MERCURY	MDL	MDL	UNITS	MDL	RESULT	MDL	ANALYZED BY:	DATE	J - ESTIMATED VALUE BETWEEN MDL AND MQL	MQL - METHOD DETECTION LIMIT	MQL - METHOD QUANTITATION LIMIT
11/24/2009	A Bass	0.029	0.2	U	119g/L	U	MDL	MDL	ANALYZED BY:	DATE	11/24/2009	A Bass	0.029	0.2	U	119g/L	U	MDL	MDL	UNITS	MDL	RESULT	MDL	ANALYZED BY:	DATE	J - ESTIMATED VALUE BETWEEN MDL AND MQL	MQL - METHOD DETECTION LIMIT	MQL - METHOD QUANTITATION LIMIT																																		

Lab-Sample Number:	K00003143004	Field Determinations	TVA-Ash Spill	pH:	7.20	pH Units		Sample Description:	Emory River mile 1.9 at underwater weir	Conductivity:	53	UHO	Project Site No.:	2B	Sample Project Name:	TVA ash spill	Station No.:	EMORY001.9R0	Date/Time Collected:	11/19/2009 10:14	Sample's Name:	Geoff Klein	Count:	ROANE - 73	FFO:	Water	Sampling Matrix:	Knoxville	Billing Code:	327.34-20	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	Priority Date:		Date/Time Received:	11/19/2009 12:45	Received By:	Ken Hitchman	ANALYTE	Digestion Metals	TEST: Digestion Metals	METHOD: EPA 200.2	RESULT	UNITS	MDL	MLL	ANALYZED BY:	DATE
ANALYTE	Digestion Metals	TEST: ICP	METHOD: EPA 200.7	RESULT	UNITS	MDL	MLL	ANALYZED BY:	DATE																																									
Iron				470	µg/L	2.9	10	A Wilson	11/20/2009																																									
ANALYTE	TEST: ICP	METHOD: EPA 200.7	RESULT	UNITS	MDL	MLL	ANALYZED BY:	DATE																																										
Antimony				300	µg/L	6.4	10	M Patanayek	11/20/2009																																									
Arsenic				U	µg/L	0.33	1	M Patanayek	11/20/2009																																									
Barium				U	µg/L	0.93	5	M Patanayek	11/20/2009																																									
Beryllium				30	µg/L	2.5	5	M Patanayek	11/20/2009																																									
Chromium				U	µg/L	0.11	1	M Patanayek	11/20/2009																																									
Cadmium				U	µg/L	0.41	1	M Patanayek	11/20/2009																																									
Cobalt				0.35J	µg/L	0.04	1	M Patanayek	11/20/2009																																									
Copper				0.41J	µg/L	0.38	1	M Patanayek	11/20/2009																																									
Lead				0.59J	µg/L	0.10	1	M Patanayek	11/20/2009																																									
Manganese				67	µg/L	0.25	1	M Patanayek	11/20/2009																																									
Nickel				1.3	µg/L	0.25	1	M Patanayek	11/20/2009																																									
Selenium				U	µg/L	1.3	5	M Patanayek	11/20/2009																																									
Silver				0.06J	µg/L	0.03	1	M Patanayek	11/20/2009																																									
Thallium				U	µg/L	0.25	0.25	M Patanayek	11/20/2009																																									
Zinc				2.9J	µg/L	1.9	5	M Patanayek	11/20/2009																																									

Lab-Sample Number:	K00003143004	Project Name:	TVA-Ash Spill	Sample Project Name:	Emory River mile 1.9 at underwater weir	Sample Description:	TVA Ash spill	Project Site No.:	2B	Station No.:	EMORY001.9R0	Date/Time Collected:	11/19/2009 10:14	Sample's Name:	Geoff Klein	Countiy:	ROANE - 73	Sample Matrix:	Water	EFo:	Knoxville	Sampling Agency:	TDEC-WPC	Billing Code:	327.34-20	Send Report To:	TDEC-WPC	Priority Involved:	TDEC-WPC	Date/Time Received:	11/19/2009 12:45	Received By:	Ken Hitchman	ANALYTE	METHOD: EPA 245.1	TEST: Mercury	DATE	ANALYZED BY:	MQL	MDL	UNITS	RESULT	U	MERCURY	11/24/2009	A Bass	0.02	0.029	Jg/L	U	0.029	0.02	MDL	UNITS	RESULT	ANALYZED BY:	MQL	MDL	UNITS	TEST: Estimated value between MDL and MQL	MDL - Method Detection Limit	MQL - Method Quantitation Limit	U - Undetected
Report Summary												Data Summary																																																			
Field Determinations	7.20	pH Units	pH:	Chlorine, residual:	53	UMHzO	Conductivity:	53	Temperatute:	11.02	Dissolved Oxygen:	12.53	mg/L	Other:	10:14	Geoff Klein	ROANE - 73	Sample Matrix:	Water	EFo:	Knoxville	Sampling Agency:	TDEC-WPC	Billing Code:	327.34-20	Send Report To:	TDEC-WPC	Priority Involved:	TDEC-WPC	Date/Time Received:	11/19/2009 12:45	Received By:	Ken Hitchman	ANALYTE	METHOD: EPA 245.1	TEST: Mercury	DATE	ANALYZED BY:	MQL	MDL	UNITS	RESULT	U	MERCURY	11/24/2009	A Bass	0.02	0.029	Jg/L	U	0.029	0.02	MDL	UNITS	RESULT	ANALYZED BY:	MQL	MDL	UNITS	TEST: Estimated value between MDL and MQL	MDL - Method Detection Limit	MQL - Method Quantitation Limit	U - Undetected

Lab-Sample Number:	K00003143005	Field Determinations	TVA-Ash Spill	pH:	7.23	pH Units	Sample Project Name:	Emory River mile 1.7	Conductivity:	54	UHO	Station No.:	EMORY001.TRO	Date/Time Collected:	11/19/2009 10:23	Sample's Name:	Geoff Klein	Sample Matrix:	Water	Countty:	ROANE - 73	EFQ:	Knoxville	Sampling Agency:	TDEC-WPC	Send Report To:	TDEC-WPC	Priority Date:	11/19/2009 12:45	Received By:	Ken Hitchman	Digestion Metals	TEST: Digestion Metals	ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE																																																																								
Antimony	480	µg/L	6.4	10	M	Pattanayek	11/20/2009	Boron	2.43	µg/L	0.33	1	M	Pattanayek	11/20/2009	Cadmium	38	µg/L	2.5	5	M	Pattanayek	11/20/2009	Chromium	U	µg/L	0.11	1	M	Pattanayek	11/20/2009	Cobalt	0.533	µg/L	0.04	1	M	Pattanayek	11/20/2009	Copper	0.883	µg/L	0.38	1	M	Pattanayek	11/20/2009	Lead	0.963	µg/L	0.10	1	M	Pattanayek	11/20/2009	Manganese	84	µg/L	0.42	1	M	Pattanayek	11/20/2009	Nickel	1.7	µg/L	0.25	1	M	Pattanayek	11/20/2009	Silver	U	µg/L	0.03	1	M	Pattanayek	11/20/2009	Thallium	0.073	µg/L	0.03	0.25	M	Pattanayek	11/20/2009	Vanadium	U	µg/L	3.4	5	M	Pattanayek	11/20/2009	Zinc	4.13	µg/L	1.9	5	M	Pattanayek	11/20/2009									
Antimony	480	µg/L	6.4	10	M	Pattanayek	11/20/2009	Boron	2.43	µg/L	0.33	1	M	Pattanayek	11/20/2009	Cadmium	38	µg/L	2.5	5	M	Pattanayek	11/20/2009	Chromium	U	µg/L	0.11	1	M	Pattanayek	11/20/2009	Cobalt	0.533	µg/L	0.04	1	M	Pattanayek	11/20/2009	Copper	0.883	µg/L	0.38	1	M	Pattanayek	11/20/2009	Lead	0.963	µg/L	0.10	1	M	Pattanayek	11/20/2009	Manganese	84	µg/L	0.42	1	M	Pattanayek	11/20/2009	Nickel	1.7	µg/L	0.25	1	M	Pattanayek	11/20/2009	Silver	U	µg/L	0.03	1	M	Pattanayek	11/20/2009	Thallium	0.073	µg/L	0.03	0.25	M	Pattanayek	11/20/2009	Vanadium	U	µg/L	3.4	5	M	Pattanayek	11/20/2009	Zinc	4.13	µg/L	1.9	5	M	Pattanayek	11/20/2009									
TEST: ICP-MS	METHOD: EPA 200.8															ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE																																																																																										
TEST: ICP	METHOD: EPA 200.7															ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE																																																																																										
TEST: ICP	METHOD: EPA 200.7															ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE																																																																																										
iron	650	µg/L	2.9	10	A	Wilson	11/20/2009	Antimony	480	µg/L	6.4	10	M	Pattanayek	11/20/2009	Barium	38	µg/L	2.5	5	M	Pattanayek	11/20/2009	Beryllium	U	µg/L	0.11	1	M	Pattanayek	11/20/2009	Chromium	U	µg/L	0.41	1	M	Pattanayek	11/20/2009	Cadmium	0.533	µg/L	2.0	5	M	Pattanayek	11/20/2009	Cobalt	0.883	µg/L	0.04	1	M	Pattanayek	11/20/2009	Copper	Lead	0.963	µg/L	0.10	1	M	Pattanayek	11/20/2009	Manganese	84	µg/L	0.42	1	M	Pattanayek	11/20/2009	Nickel	1.7	µg/L	0.25	1	M	Pattanayek	11/20/2009	Silver	U	µg/L	0.03	1	M	Pattanayek	11/20/2009	Thallium	0.073	µg/L	0.03	0.25	M	Pattanayek	11/20/2009	Vanadium	U	µg/L	3.4	5	M	Pattanayek	11/20/2009	Zinc	4.13	µg/L	1.9	5	M	Pattanayek	11/20/2009

Lab-Sample Number:	K00003143005	Field Determinations	TVA-Ash Spill	Sample Description:	Emory River mile 1.7	Sample Project Name:	TVA ash spill	Project Site No.:	3	PH Units	7.23	Field Determinaltions	TVA-Ash Spill	Sample Project Name:	Emory River mile 1.7	Sample Description:	Chlorine, residual	Conductivity:	54	UMHzO	UMHO	Station No.:	EMORY0017R0	Date/Time Collected:	11/19/2009 10:23	Sample's Name:	Geoff Klein	County:	ROANE - 73	Sample Matrix:	Water	EFO:	Knoxville	Sampling Agency:	TDEC-WPC	Priority Date:	327.34-20	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	Date/Time Received:	11/19/2009 12:45 <th>Received By:</th> <td>Ken Hitchman</td> <th>TEST: Mercury</th> <th>METHOD: EPA 245.1</th> <th>ANALYTE</th> <th>MDL</th> <th>MDL</th> <th>UNITS</th> <th>RESULT</th> <th>U</th> <th>19/L</th> <th>0.029</th> <th>0.2</th> <th>A BasS</th> <th>11/24/2009</th> <th>Mercury</th>	Received By:	Ken Hitchman	TEST: Mercury	METHOD: EPA 245.1	ANALYTE	MDL	MDL	UNITS	RESULT	U	19/L	0.029	0.2	A BasS	11/24/2009	Mercury
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Lab-Sample Number:	K00003143006	Field Determinations	PH: 7.68	PH Units	Sample Description:	TVA-Ash Spill	Sample Project Name:	Emory River mile 0.1	Station No.:	EMORY000.1R0	Date/Time Collected:	11/19/2009 10:36	Sample Name:	Geoff Klein	Sample Matrix:	Water	Countty:	RONNE - 73	EFO:	Knoxville	Sampling Agency:	TDEC-WPC	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	Priority Date:	11/19/2009 12:45	Received By:	Ken Hitchman	ANALYTE	Digestion Metals	METHOD: EPA 200.2	TEST: ICP	DATE	11/20/2009
ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Aluminum	120	µg/L	6.4	10	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Arsenic	U	µg/L	0.33	1	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Barium	39	µg/L	2.5	5	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Cadmium	U	µg/L	0.41	1	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Chromium	U	µg/L	2.0	5	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Cobalt	0.20J	µg/L	0.04	1	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Copper	U	µg/L	0.38	1	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Nickel	1.5	µg/L	0.25	1	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Selenium	38	µg/L	0.42	1	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Silver	U	µg/L	0.10	1	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Thallium	0.03J	µg/L	0.03	1	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								
Zinc	U	µg/L	1.9	5	M Pattanayek	11/20/2009	TEST: ICP-MS	METHOD: EPA 200.7	TEST: ICP	METHOD: EPA 200.8	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.7	ANALYTE	RESULTS	UNITS	MDL	MQL	ANALYZED BY:	DATE	TEST: ICP-MS	METHOD: EPA 200.8								

Project Number:	K000031A3006	Sample Name:	TVA-Ash Spill	Sample Description:	Emory River mile 0.1 TVA ash spill	Sample Site No.:	4	Station No.:	EMORY000.RRO	Sample Name:	Geoff Klein	County:	ROANE - 73	Sample Matrix:	Water	EFo:	Knoxville	Sampling Agency:	TDEC-WPC	Send Report To:	TDEC-WPC	Prioritary Date:	11/19/2009	Date/Time Received:	11/19/2009 12:45 <th>Received By:</th> <td>Ken Hitchman</td> <th>TEST: Mercury</th>	Received By:	Ken Hitchman	TEST: Mercury		
Field Determinations	7.68	pH:	Chlorine, residual:	Conductivity:	217	Temperature:	13.70	Dissolved Oxygen:	12.04	mgl/L	Flow:	CFS	Count:	Geoff Klein	ROANE - 73	Sample Matrix:	Water	EFo:	Knoxville	Sampling Agency:	TDEC-WPC	Send Report To:	TDEC-WPC	Prioritary Date:	11/19/2009	Date/Time Received:	11/19/2009 12:45 <th>Received By:</th> <td>Ken Hitchman</td> <th>TEST: Mercury</th>	Received By:	Ken Hitchman	TEST: Mercury
U	0.029	µg/L	MDL	MDL	UNITS	RESULT	ANALYZED BY:	DATE	A Bass	11/24/2009	Method:	EPA 245.1	Method:	U	ANALYZED BY:	DATE	ANALYTE	Mercury	Metricry											

Lab-Sample Number:	K00003143007	Field Determinations	pH: 7.70	pH Units	Sample Description:	TVA-Ash Spill	Sample Site Name:	TVA Ash Spill	Project No.:	CLINCO02.3R0	Date/Time Collected:	11/19/2009 11:05	Sample's Name:	Geoff Klein	CFs:		EFO:	Knoxville	Sampling Agency:	TDEC-WPC	Brilling Code:	327.34-20	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	Priority Date:		Received By:	Ken Hitchman	ANALYTE:	Digestion Metals	RESULT	UNITS	MDL	MGL	ANALYZED BY:	DATE																																																																																			
TEST: Digestion Metals	METHOD: EPA 200.2														TEST: ICP			METHOD: EPA 200.7														ANALYTE	iron	180	µg/L	2.9	10	A Wilson	11/20/2009																																																																																		
TEST: ICP	METHOD: EPA 200.7														ANALYTE	arsenic	0.93	µg/L	2.5	5	M Patlanyek	11/20/2009	barium	40	µg/L	0.11	1	M Patlanyek	11/20/2009	beryllium	Be	180	µg/L	2.9	10	A Wilson	11/20/2009	chromium	U	µg/L	0.41	1	M Patlanyek	11/20/2009	cadmium	U	µg/L	0.11	1	M Patlanyek	11/20/2009	cobalt	0.23J	µg/L	0.04	1	M Patlanyek	11/20/2009	copper	U	µg/L	0.38	1	M Patlanyek	11/20/2009	lead	0.33J	µg/L	0.10	1	M Patlanyek	11/20/2009	manganese	M	1.9	5	5	M Patlanyek	11/20/2009	nickel	1.5	µg/L	0.25	1	M Patlanyek	11/20/2009	silver	44	µg/L	0.42	1	M Patlanyek	11/20/2009	tin	U	µg/L	1.3	5	M Patlanyek	11/20/2009	thallium	0.03J	µg/L	0.03	1	M Patlanyek	11/20/2009	zinc	Zn	2.8J	µg/L	1.9	5	M Patlanyek	11/20/2009						
TEST: ICP-MS	METHOD: EPA 200.8														ANALYTE	Antimony	130	µg/L	6.4	10	M Patlanyek	11/20/2009	arsenic	U	µg/L	0.33	1	M Patlanyek	11/20/2009	barium	U	µg/L	0.93	5	M Patlanyek	11/20/2009	beryllium	40	µg/L	2.5	5	M Patlanyek	11/20/2009	chromium	U	µg/L	0.11	1	M Patlanyek	11/20/2009	cadmium	U	µg/L	0.41	1	M Patlanyek	11/20/2009	cobalt	0.23J	µg/L	0.04	1	M Patlanyek	11/20/2009	copper	U	µg/L	0.38	1	M Patlanyek	11/20/2009	lead	0.33J	µg/L	0.10	1	M Patlanyek	11/20/2009	manganese	M	1.9	5	5	M Patlanyek	11/20/2009	nickel	1.5	µg/L	0.25	1	M Patlanyek	11/20/2009	silver	44	µg/L	0.42	1	M Patlanyek	11/20/2009	tin	U	µg/L	1.3	5	M Patlanyek	11/20/2009	thallium	0.03J	µg/L	0.03	1	M Patlanyek	11/20/2009	zinc	Zn	2.8J	µg/L	1.9	5	M Patlanyek	11/20/2009

## U - Undetected

#### MQL - Method Quantitation Limit

J - Estimated value between MDL and MQL

TEST: Mercury	METHOD: EPA 245.1	ANALYTE	RESULT	UNITS	MDL	MDL ANALYZED BY:	DATE	Mercury
			U	Hg/L	0.029	0.2	A Bas s	11/24/2009

Project Name:	K00003143007	Lab-Sample Number:	K00003143007
Sample Description:	TVA-Ash Spill	Project Name:	K00003143007
Clinch River mile 2.3	Chlorine, residual:	Field Determinations	pH Units
TVA Ash spill	pH:	7.70	UMHO
5	Conductivity:	219	mg/L
6	Temperature:	13.72	Dissolved Oxygen: 11.95
7	Geoff Klein	ROANE - 73	Countiy:
8	Other:	Water	Sample Matrix:
9	Flow:	Knoxville	EFO:
10	11/19/2009 11:05	TDEC-WPC	Sampling Agency:
11	CLINCO023R0	327.34-20	Billing Code:
12	Geoff Klein	TDEC-WPC	Send Report To:
13	ROANE - 73	TDEC-WPC	Priority Date:
14	Water	TDCEC-WPC	Date/Time Received:
15	Knoxville	TDCEC-WPC	Ken Hitchman

Lab-Sample Number:	K00003143008	Field Determinations	pH: 7.49	PB Units	Sample Description:	TVA-Ash Spill	Sample Project Name:	Clinch River TVA Discharge Point	Sample Project Name:	TVA ash spill	Project Site No.:	5A	Station No.:	KingsHOUTF2	Date/Time Collected:	11/19/2009 11:17	Sample's Name:	Geoff Klein	County:	ROANE - 73	Sample Matrix:	Water	EFQ:	Knoxville	Sampling Agency:	TDEC-WPC	Billling Code:	327.34-20	Send Report To:	TDEC-WPC	Agency Involved:	TDCEC-WPC	PrioritY Date:		Date/Time Received:	11/19/2009 12:45	Received By:	Ken Hitchman /	Digestion Metals	11/20/2009	Digestion Metals	M Pattanayek	11/20/2009	ANALYTE	TEST: ICP	METHOD: EPA 200.2	RESULT	UNITS	MDL	MLL	ANALYZED BY:	DATE
ANALYTE	TEST: ICP	METHOD: EPA 200.7	RESULT	UNITS	MDL	MLL	ANALYZED BY:	DATE																																												
Iron			400	µg/L	2.9	10	A Wilson	11/20/2009																																												
ANALYTE	TEST: ICP-MS	METHOD: EPA 200.8	RESULT	UNITS	MDL	MLL	ANALYZED BY:	DATE																																												
Aluminum			340	µg/L	6.4	10	M Pattanayek	11/20/2009																																												
Antimony			0.731	µg/L	0.33	1	M Pattanayek	11/20/2009																																												
Arsenic			3.53	µg/L	0.93	5	M Pattanayek	11/20/2009																																												
Barium			48	µg/L	2.5	5	M Pattanayek	11/20/2009																																												
Beryllium			U	µg/L	0.11	1	M Pattanayek	11/20/2009																																												
Chromium			U	µg/L	0.41	1	M Pattanayek	11/20/2009																																												
Cobalt			U	µg/L	0.04	1	M Pattanayek	11/20/2009																																												
Copper			0.403	µg/L	0.38	1	M Pattanayek	11/20/2009																																												
Lead			1.7	µg/L	0.25	1	M Pattanayek	11/20/2009																																												
Nickel			120	µg/L	0.10	1	M Pattanayek	11/20/2009																																												
Selenium			U	µg/L	1.3	5	M Pattanayek	11/20/2009																																												
Silver			0.111	µg/L	0.03	1	M Pattanayek	11/20/2009																																												
Thallium			U	µg/L	0.03	0.25	M Pattanayek	11/20/2009																																												
Zinc			2.71	µg/L	1.9	5	M Pattanayek	11/20/2009																																												

Lab-Sample Number:	K00003143008	Project Name:	TVA-Ash Spill	Sample Project Name:	Clinch River TVA Discharge Point	Sample Description:	TVA ash spill	Sample Site No.:	5A	Station No.:	KingsHoutF2	Date/Time Collected:	11/19/2009 11:17	Sample's Name:	Geoff Klein	County:	ROANE - 73	Sample Matrix:	Water	EFo:	Knoxville	Sampling Agency:	TDEC-WPC	Billing Code:	327.34-20	Send Report To:	TDEC-WPC	Agency Involved:	TDEC-WPC	PrioritY Date:	11/19/2009 12:45	Received By:	Ken Hitchman	Mercury	U	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
TEST: Mercury		METHOD: EPA 245.1		J - Estimated value between MDL and MQL		MDL - Method Detection Limit		MQL - Method Quantitation Limit		U - Undetectable																															
Field Determinations	7.49	pH:	7.49	Conductivity:	77	Temperature:	11.72	Dissolved Oxygen:	13.25	mg/L	U	0.029	0.2	A Bass	11/24/2009																										

ANALYTE	TEST: ICP-MS	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
METHOD: EPA 200.8							
Aluminum	61	10	M.Pattanayek	11/20/2009	6.4	µg/L	U
Antimony	61	1	M.Pattanayek	11/20/2009	0.33	µg/L	U
Arsenic	39	5	M.Pattanayek	11/20/2009	0.93	µg/L	U
Barium	39	5	M.Pattanayek	11/20/2009	2.5	µg/L	U
Beryllium	39	1	M.Pattanayek	11/20/2009	0.11	µg/L	U
Cadmium	39	1	M.Pattanayek	11/20/2009	0.41	µg/L	U
Chromium	39	1	M.Pattanayek	11/20/2009	2.0	µg/L	U
Cobalt	37	1	M.Pattanayek	11/20/2009	0.04	µg/L	U
Lead	37	1	M.Pattanayek	11/20/2009	0.10	µg/L	U
Manganese	37	1	M.Pattanayek	11/20/2009	0.25	µg/L	U
Nickel	37	1	M.Pattanayek	11/20/2009	1.3	µg/L	U
Silver	37	1	M.Pattanayek	11/20/2009	0.03	µg/L	U
Thallium	37	5	M.Pattanayek	11/20/2009	3.4	µg/L	U
Vanadium	37	5	M.Pattanayek	11/20/2009	1.9	µg/L	U
Zinc	37	5	M.Pattanayek	11/20/2009	0.20	µg/L	U

ANALYTE	TEST: ICP	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
METHOD: EPA 200.7							
Iron	100	10	A.Wilson	11/20/2009	2.9	µg/L	U
ANALYTE	TEST: ICP-MS	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
METHOD: EPA 200.8							
Digestion Metals	11/19/2009	11/20/2009	M.Pattanayek	11/20/2009	12.45	11/19/2009	Ken Hitchman
ANALYTE	TEST: Digestion Metals	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE

Lab-Sample Number:	Project Name:	Sample Project Name:	Project Site No.:	Station No.:	Date/Time Collected:	Agency Involved:	Send Report To:	Sampling Code:	Sampling Agency:	EF0:	Sample Matrix:	Country:	Country:	Sample Matrix:	Sample Name:	Send Report To:	Date/Time Received:	Priority Date:	TEST: Digestion Metals
K00003143009	TVA-Ash Spill	TVA Ash Spill	6	CLINCO04.5R0	11/19/2009 10:50	Geoff Klein	TDEC-WPC	TDCC-WPC	TDCC-WPC	Other:	ROANE - 73	CF0	CF0	Water	Knoxville	Ken Hitchman	11/19/2009 12:45	TEST: Digestion Metals	
	Field Determinations	PH:	7.65	250	11/19/2009	Dissolved Oxygen:	TDCC-WPC	TDCC-WPC	TDCC-WPC	Other:	Geoff Klein	CF0	CF0	Flow:	Geoff Klein	11/19/2009 12:45	Received By:	TEST: Digestion Metals	
		Conductivity:	250	14.33	10:50	Dissolved Oxygen:	TDCC-WPC	TDCC-WPC	TDCC-WPC	Other:	ROANE - 73	CF0	CF0	CF0	ROANE - 73	11/19/2009 12:45	Received By:	TEST: Digestion Metals	
		Temperature:	250	11.44	10:50	Other:	TDCC-WPC	TDCC-WPC	TDCC-WPC	Other:	Geoff Klein	CF0	CF0	CF0	Geoff Klein	11/19/2009 12:45	Received By:	TEST: Digestion Metals	
		pH:	7.65	UMHzo	10:50	Other:	TDCC-WPC	TDCC-WPC	TDCC-WPC	Other:	ROANE - 73	CF0	CF0	CF0	Geoff Klein	11/19/2009 12:45	Received By:	TEST: Digestion Metals	
		Project Description:	Clinch River mile 4.5 near Sugar Grove Valley R Chlotharne, residuals																TEST: Digestion Metals
		Sample Site Description:	TVA Ash Spill																TEST: Digestion Metals
		Sample Site No.:	6																TEST: Digestion Metals
		Station No.:	CLINCO04.5R0																TEST: Digestion Metals
		Date/Time Collected:	11/19/2009 10:50																TEST: Digestion Metals
		Sample Name:	Geoff Klein																TEST: Digestion Metals
		Send Report To:	TDEC-WPC																TEST: Digestion Metals
		Agency Involved:	TDEC-WPC																TEST: Digestion Metals
		Date/Time Received:	11/19/2009 12:45																TEST: Digestion Metals

Lab-Sample Number:	K00003143009	Project Name:	TVA-Ash Spill	Field Determinations	pH: 7.65	Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R Chlorine, residual	Sample Project Name:	TVA ash spill	Project Site No.:	6	Station No.:	CLINCO04.5R0	Date/Time Collected:	11/19/2009 10:50	Sample Name:	Geoff Klein	Countty:	ROANE - 73	Sample Matrix:	Water	EFO:	Knoxville	Sampling Agency:	TDEC-WPC	Billing Code:	327-34-20	Send Report To:	TDEC-WPC	Priority Date:	11/19/2009 12:45	Received By:	Ken Hitchman	TEST: Mercury	METHOD: EPA 245A	ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	MERCURY	U	mg/L	0.029	0.2	A Bass	11/24/2009
j - Estimated value between MDL and MQL	MDL - Method Detection Limit	MQL - Method Quantitation Limit	U - Undetectable																																														

TEST: Digestion Metals	ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
	Digestion Metals	11/20/2009	M Pattanayek	11/20/2009			
	TEST: ICP	ANALYTE	RESULT	UNITS	MDL	ANALYZED BY:	DATE
		METHOD: EPA 200.7					
	Iron	120	µg/L	2.9	10	A Wilson	12/20/2009
	TEST: ICP-MS	ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:
		METHOD: EPA 200.8					
	Aluminum	83	µg/L	6.4	10	M Pattanayek	11/20/2009
	Arsenical	U	µg/L	0.33	1	M Pattanayek	11/20/2009
	Barium	45	µg/L	0.93	5	M Pattanayek	11/20/2009
	Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009
	Cadmium	U	µg/L	0.41	5	M Pattanayek	11/20/2009
	Chromium	0.211	µg/L	0.04	1	M Pattanayek	11/20/2009
	Cobalt	U	µg/L	2.0	5	M Pattanayek	11/20/2009
	Copper	U	µg/L	0.38	1	M Pattanayek	11/20/2009
	Lead	0.301	µg/L	0.10	1	M Pattanayek	11/20/2009
	Manganese	50	µg/L	0.25	1	M Pattanayek	11/20/2009
	Nickel	1.5	µg/L	0.42	1	M Pattanayek	11/20/2009
	Selenium	U	µg/L	1.3	5	M Pattanayek	11/20/2009
	Silver	U	µg/L	0.03	1	M Pattanayek	11/20/2009
	Thallium	U	µg/L	0.03	0.25	M Pattanayek	11/20/2009
	Zinc	2.31	µg/L	1.9	5	M Pattanayek	11/20/2009

